

REMARKS

Entry of the foregoing, re-examination and reconsideration of the subject matter identified in caption, as amended, pursuant to and consistent with 37 C.F.R. §1.116, and in light of the remarks which follow, are respectfully requested.

Claim 12 has been canceled without prejudice or disclaimer. Contrary to the information in the Office Action Summary (PTOL-326), claims 1-26 were pending in this application when the Final Rejection was mailed. Claims 16-26 stand withdrawn from consideration on the merits. Upon entry of this Amendment, claims 1-11 and 13-26 will be currently pending in the application.

Claim 12 was finally rejected under 35 U.S.C. §112, first paragraph, for the reasons given in paragraph (3) of the Office Action. Without conceding the propriety of the rejection, claim 12 has been canceled to reduce the number of issues on appeal.

Claims 1, 3, 5-11 and 13 were rejected under 35 U.S.C. §103(a) as unpatentable over U.S. Patent No. 5,616,395 to *Baravian et al.* in view of U.S. Patent No. 6,235,657 to *Schops et al.* and further in view of U.S. Reissue Patent No. RE 33,023 to *Hiers*, for the reasons set forth in paragraph (5) of the Office Action. It appears from paragraph (12) of the Office Action that claim 4 has also been rejected on this ground. Reconsideration of this rejection is requested for at least the following reasons.

Applicants have previously pointed out that *Baravian et al.* '395 fails to disclose at least three features set forth in present claim 1: (1) the glass fiber layer is not pre-consolidated with a binding agent; (2) the formed laminate is not subjected to a final consolidation of any kind, let alone one using an acrylate or styrene binder;

and (3) the synthetic non-woven layer and glass fiber layer are not needled together such that a part of the synthetic filaments penetrate the laminate and emerge from the surface thereof and lie adjacent thereto. The laminates of the invention possess excellent mechanical strength, dimensional stability and fire resistance and are resistant to delamination. The needling technique set forth in the claims provides effective anchoring (page 9, line 24) and serves to "interlock" the synthetic and glass fiber layers as well as the final layer of consolidated binder.

Despite the fact that *Baravian et al.* '395 expressly teaches away from a final consolidation ("consolidation and thermostabilization take place only in the first layer and before assembly with the second layer" – column 6, lines 46-47, underlining added), the Examiner argues that it would have been obvious to finally consolidate the laminate of *Varabian et al.* '395 in view of the disclosure in *Schops et al.* '657. Applicants disagree.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The motivation to modify the relied on prior art must flow from some teaching in the art that suggests the desirability or incentive to make the modification needed to arrive at the claimed invention. *In re Napier*, 55 F.2d 610, 613; 34 U.S.P.Q.2d 1782, 1784 (Fed. Cir. 1985). Obviousness cannot be established by modifying the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive

supporting the modification. *In re Geiger*, 815 F.2d 686, 688; U.S.P.Q.2d 1276, 1278 (Fed. Cir. 1987).

No motivation exists in the cited art to finally consolidate the laminates of *Baravian et al.* '395. To do so would be contrary to the express teachings of the reference and could render the laminates unfit for their intended purpose. "The relevant portions of a reference include not only those teachings which would suggest particular aspects of an invention to one having ordinary skill in the art, but also teachings which would lead such a person away from the claimed invention. See *In re Lunsford*, 53 CCPA 986, 357 F.2d 380, 148 U.S.P.Q. 716 (1965)."

The second element of a proper rejection under §103(a) is a reasonable expectation of success. An express objective of *Baravian et al.* '395 is to avoid surrounding the glass fiber layer with synthetic layers which would adversely affect the fire resistant properties of the laminate (column 2, lines 9-15). A final consolidation with resin binder would coat the glass fiber layer, a result directly contrary to the stated objective of the reference and one which would be expected to adversely affect the properties desired by the patentees. Thus, there would be no reasonable expectation of success, i.e., modifying *Baravian et al.* '395 in the manner suggested in the Office Action would be detrimental to the laminates thereof.

Baravian et al. '395 indicates that the respective layers are adhesively bonded and needled or seam knitted (column 2, lines 50-52; claim 1, last four lines). No specific needling conditions or techniques are disclosed. According to the Examiner, it would have been obvious in view of *Hiers* '023 to needle the two layers employed in the primary reference laminates in such a manner that a part of the synthetic filaments penetrate the surface of the laminate and lie adjacent thereto. Applicants

strongly disagree with this position which is clearly based on a hindsight reconstruction of the cited art.

The needling techniques disclosed in *Hiers* '023 do not result in a part of the synthetic fibers penetrating the laminate surface to lie adjacent thereto as specified in the present claims. This is clear from Figures 1 and 2 of the reference. In the needling technique of *Hiers* '023, the inner surfaces are tightly bound while the outer surfaces are undisturbed. Thus, even if one uses the needling technique of *Hiers* '023 to find the layers of *Baravian et al.* '395, the resultant laminate would not have the features recited in the present claims.

The Examiner stated in the Final Rejection that "no specific needling technique is set forth in claim 1" (page 4, lines 15-16). Applicants strongly disagree and point out that claim 1 clearly recites a structural feature, i.e., part of the organic synthetic filaments penetrate through the laminate and emerge at the lower surface of the laminate and lie adjacent thereto.

Applicants also noted in the last Response that the claimed feature wherein a part of the organic filaments penetrate the lower surface of the laminate and lie adjacent thereto provides certain advantages. This acts to "interlock" the layers of the laminate and also serves to "anchor" the binders used in the final consolidation. The Examiner responded by stating in the Final Rejection that applicant "has not recited such limitations" (page 4, last line). Applicants point out that the feature which provides the advantages is recited in the claims and must be considered in assessing patentability.

For at least these reasons, the §103(a) rejection based on *Baravian et al.* '395 in view of *Schops et al.* '657 and further in view of *Hiers* '023 should be withdrawn. Such action is earnestly requested.

Claim 2 was finally rejected under 35 U.S.C. §103(a) as unpatentable over *Baravian et al.* '395 in view of *Schops et al.* '657 and further in view of *Hiers* '023 as applied to claim 1 and further in view of U.S. Patent No. 5,171,629 to *Heidel et al.* for the reasons given in paragraph (6) of the Office Action. Claim 14 was finally rejected under 35 U.S.C. §103(a) as unpatentable over *Baravian et al.* '395 in view of *Schops et al.* '657 and further in view of *Hiers* '023 as applied to claim 11 and further in view of U.S. Patent No. 4,816,327 to *Binnarsley et al.* for the reason set forth in paragraph (7) of the Office Action. Also, claim 15 was finally rejected under 35 U.S.C. §103(a) as unpatentable over *Baravian et al.* '395 in view of *Schops et al.* '657 and further in view of *Hiers* '023 as applied to claim 1 and further in view of U.S. Patent No. 5,571,596 to *Johnson* for the reasons set forth in paragraph (8) of the Office Action. Reconsideration and withdrawal of these rejections are requested.

Heidel '629, *Binnarsley* '327 and *Johnson* '596 are applied because they allegedly disclose the features of dependent claims 2, 14 and 15. The disclosures of these patents do not supply the deficiencies of the §103 rejection based on the combination of *Baravian et al.* '395, *Schops et al.* '657 and *Hiers* '023 for at least the reasons enumerated above. Accordingly, the various §103 rejections which rely on *Heidel et al.* '629 or *Binnarsley* '327 or *Johnson* '596 do not establish a *prima facie* case of obviousness and these rejections should be withdrawn. Such action is respectfully requested.

Claim 13 has been objected to in paragraph (10) of the Final Rejection as dependent upon a rejected base claim but otherwise allowable. Claim 13 was also rejected on prior art for reasons given in paragraph (5) of the Office Action. In view thereof, applicants request clarification of the status of claim 13.

From the foregoing, further and favorable action in the form of a Notice of Allowance is believed to be next in order and such action is earnestly solicited. If there are any questions concerning this paper or the application in general, the Examiner is invited to telephone the undersigned at (703) 838-6683 at her earliest convenience.

Respectfully submitted,

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